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Public-Private Dichotomy in Utilization of Health Care Services in India

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Abstract

This paper attempts to highlight the differences in utilization of health care services provided by the public and private sectors in India. In addition, it also explores a marked regional pattern in utilization of health services. Using the large-scale national survey data (DLHS RCH-II, 2002-04 and 60th round National Sample Survey, 2004), the authors have selected socio-economic as well as demographic factors determining health treatment seeking behavior, in terms of availing services from public or private sources, which have been addressed with objectivity. Furthermore, selected states of India have been ranked on the basis of extent of inequality (in terms of economic status) in utilization of health services from public and private sources. The paper, in its totality, advocates for economically affordable and better quality health care services for the masses.

Author's Note

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In the present era of population growth and demographic restructuring, the burden of providing health care has increased. Many countries have pursued health services distribution to their citizenry through merely expanding services with non-governmental organization (NGO) assistance. This solution is not permanent, especially in developing democratic countries like India, where the prime duty of the government is to provide better and equally accessible services to every strata of the population. Nonetheless, concerns about the ability of governments to finance health services adequately, the poor performance of public health service delivery systems and the desire to expand the choices available to patients have led a number of Asian countries to

encourage the expansion of private-sector healthcare (William & Patricia, 1997). India is not an exception; private health care services are increasingly prevalent throughout the nation. Today, the private sector provides almost 75 percent of health services in India (NRHM, 2005-12).

The real victims of this unregulated spread of private health services in India are the poor, who need better and cheaper services but are not able to afford high priced private health care. If the government assumes that the people prefer private services over public services as a matter of choice, it need only motivate private services to enter into the health sector. However this would be a problem for the development of sustainable health services in the country. The present study attempts to explore this issue of public-private dichotomy in Indian health care services. People, especially women—the focal point of country's reproductive and child health care services—switch over to private health services once they get their first treatment in public care. This paper will also look into the factors that determine a patient's decision to choose private health care sources over public ones.[1]

Almost seventy percent of India's population lives in rural areas that lack adequate health facilities. Private health services are often concentrated in areas with better infrastructure facilities where they can profit more. Thus, they are unable to satisfy rural health care needs. Even if private services are available in rural areas, the quality differs as compared to that of private providers in urban areas. To some extent, private health services satisfy the needs of patients when compared to public health services. In some cases we find that the failure in providing treatment is not substantially lower in private services as compared to public services. Post-treatment, however, people are more likely to follow-up with private rather than public services.

Bhat (1997) sheds light on the growth of private sector over the years. He argues that a number of factors have triggered it, including a new national economic policy, the rapid influx of medical technology, growing public sector hospital deficits and a rising middle class. Its growth has profound implications for the character of the current Indian healthcare system and its future course.

Recent studies indicate that private health care significantly affects both the cost and quality of health care services in India (Uplekar, 1989; Duggal and Amin, 1989; Vishwanathan and Rohde, 1990; Yesudian, 1990). It is evident that the people of India, including the poor, make considerable use of the private health sector, but at what cost? The National Sample Survey (NSS) data reveals that the average cost of treatment in the private sector for rural and urban inpatients were 2.1 to 2.4 times higher than in the public sector respectively from 1995-96 (India Health Report, 2003). The National Rural Health Mission (NRHM) document has states that curative services favor the rich. For every rupee spent on the poorest twenty percent of the population, three rupees are spent on the richest quintile (Singh, 2006). The recent findings (NSS, 2004) reveal that most of the people in northern states, especially Uttar Pradesh and Uttaranchal, and north eastern states, such as Nagaland, Mizoram and Assam, finance more than eighty percent of their health treatment expenditure from other sources, such as borrowings,

[1] Public and Private health care services will be extensively used in this paper as modern institutional health care services. Public health care services which may even somewhere be used as Govt. health services includes all types of Hospitals (e.g. UHC/UHP/UFWC, CHC/Rural Hospital, Primary Health Center, Sub-Center/ANM, AYUSH Hospital/Clinic etc.) Mobile Clinic, Anganwadi/ICDS Center, ASHA, other Community-based health workers etc. organized and administered by Government of India or its states. Private health care services also include hospitals, clinics, mobile clinics, but administered by individuals or private organizations including private practitioners/doctors, Pharmacy/Drugstore etc.

contributions from friends and relatives, and by selling ornaments.

The increasing gaps in health service utilization from public versus private sources reinforce existing inequalities in the country.[2] The rich benefit from having access to both better quality health care services in the private sector and to subsidized services from government sources. The poor lose out on quality in the public sector and cannot afford private health care services.

Utilization of health services differs by the demographic and socio-economic status of the individual as well, in addition to the availability, accessibility and quality of services in different places or regions. There appears to be a considerable convergence of both research and opinion concluding that the ability to pay is the major determinant of the utilization of health services, once symptoms are perceived as serious. The cultural and socio-psychological factors once thought to account for much of the observed variations among social classes and ethnic groups in their utilization behavior are largely irrelevant (Bice et al. 1972, 1973; Mechanic 1969; and Montiero 1973).

As discussed later in the paper, the economic status of the individual affects the utilization of health care services in different states of India.[3] Finally, for selected states of India (for which the sample size is sufficient), a ranking based on the extent of inequality in terms of the economic standard of the population in utilizing public and private health care services is presented. This paper will attempt to determine in which states inequality is higher in terms of utilization of different reproductive and child health (RCH) care services and in terms of general health care from the public and private sectors.

Data and Methods

The study utilizes data from National Sample Survey (NSS, 60th round: January-June, 2004), conducted by the National Sample Survey Organization (NSSO), a division of the Government of India. The survey covers the curative aspects of the general health care system in India and also the utilization of health care services provided by the public and private sector, while measuring the expenditure households incur from using these services. It is based on the information collected over six months in 2004, from 47,302 rural and 26,566 urban households spanning the entire country. The enquiry on morbidity was conducted with a reference period of 15 days. All ailments suffered by each member, both present as well as the deceased, and whether or not the patient was hospitalized for treatment, were recorded from sample households. In addition, information was collected for every hospitalization of a member, whether living or deceased at the time of survey, and during the 365 days preceding the date of enquiry. Information on the utilization of health care services by household members as inpatients of hospitals during the 365 days prior to the survey, separately for rural and urban areas, has been extracted from the above mentioned source.

Information on the utilization of health services for different reproductive and

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[2] Equality of utilization is best understood as being a situation where patients with equal needs for health care receive equal treatment, both in terms of the volume and the quality of the services (Mooney, 1983). Equality of access represents a situation where people with equal needs have equal opportunity to use health services (Mooney et al., 1991). It is a supply side phenomenon; equal access is achieved when patients with the same needs face the same costs of health care consumption both in terms of time and money.

[3] Economic status of the people is considered in this paper on the basis of the household standard of living and the monthly per capita expenditure, used for services received from DLHS-RCH-II survey and National Sample Survey (60th Round) respectively.

child health care components have also been drawn from the District Level Household Survey (DLHS)-RCH–II. The survey extends the information on induced abortions, antenatal, natal and post-natal care, family planning services and the RTI/STI related components of the women in reproductive age group. This survey also provides information on child health care. In addition, maps have been prepared to reveal marked state-wise variations in the utilization of public and private health services in general, for different reproductive and child health care component and for the utilization of health care services in rural and urban areas separately, using a Geographical Information System (GIS) package.

According to the recent NSS survey (2004), almost 97 and 96 percent of rural and urban inpatients of hospitals respectively received health treatment from the private sources during the period of one year before the survey. Accordingly, as such a vast majority of the study's population had means to access such services, there is likely a bias toward a higher socio-economic background in the study's sample. A solution to correct for this potential problem employs a logistic regression model, separately for rural and urban areas. The dependent variable is the population, who received treatment as inpatients from private health services (Public health services=0, Private health services=1) during the last one year before survey in 2004. The age composition of the population, sex composition, marital status, religion, social group, education level, household size, monthly per capita expenditure (MPCE) and nature of ailment are considered as independent predictors.

Seven more separate regressions were carried out considering the inclination toward private health sources in the case of other reproductive and child health care services. These services were related to: induced abortion, antenatal check-ups, temporary contraceptive use, treatment for any health problem during pregnancy, place of delivery (excluding home delivery), RTI/STI related treatment, and the treatment of Diarrhea/Pneumonia to children below three years of age. These were considered as dependent variables in separate logistic regression models. The possible available variables were used as independent predictors in the model. Some of these were the age of women, years of schooling of women and spouse, marital duration, caste, religion, reasons for not visiting government health services, household standard of living, residential status, and a few macro regions of India. These macro regions encompassed: Northern Hilly Region, which includes the states of Jammu & Kashmir, Himachal Pradesh, Uttaranchal, Sikkim and the north-eastern states; Western high economy region, which includes the states of Maharashtra, Gujarat, Punjab, Haryana and Delhi; Central-Western-Eastern (CWE) Low Economy Region, which includes the states of Uttar Pradesh, Bihar, Jharkhand, Orissa, Madhya Pradesh, Chhattisgarh, Rajasthan and West Bengal (the later might be referred to as representative of the EAG (Empowered Action Group) states); and, lastly, the Southern Region of India, which includes the four southern states of Andhra Pradesh, Tamil Nadu, Kerala and Karnataka.

To study the inequality in the utilization of health services (i.e. public and private health services): (a) for general health indicator in rural and urban areas separately, and (b) for various reproductive and child health services (RCH) within public and private health services, among the three economic groups across the selected states of India, a simple measure of association has been used. The economic groups were represented by the proportions of three equally comparative groups in terms of MPCE quartile, which was used for NSS data set and in terms of standard of living (used for DLHS-RCH-II data set) in the present paper. The standard of living index (SLI) is based on different

facilities and possession of amenities in a household. To understand whether distribution of population by utilization of health services for different health care or treatment differs according to MPCE group or SLI group, the study employed a chi-square (χ^2) test of association between the two variables. If the test revealed significant value of χ^2 – which indicates an association or inequality in the distribution between two variables – the degree of association was measured by computing $\sqrt{(\chi^2/N)}$.

An association between MPCE or SLI and the utilization of health services by public and private sources revealed that the population of different economic groups was not equal in terms of their use of two different health services. Following from this finding, states were ranked according to the value of $\sqrt{(\chi^2/N)}$. The lower rank indicates a strong association, which implies high inequality while a higher rank indicates weak association, impliying low inequality. In the case of states with the same values of $\sqrt{(\chi^2/N)}$, tied ranks were awarded.

Results and Discussion

Utilization pattern of health care services in India

The National Sample Survey (2004) with its 250,862 sample size in rural areas and 132,638 samples in urban areas (out of which more than 40 percent of household members in both rural as well as urban areas had experienced any health problem in the last year and also received treatment as inpatients of hospitals) provided an opportunity to assess the utilization pattern of health care services empirically. Out of the forty percent of the population who experienced any health problem, two percent received services exclusively from public health sources, 53 percent exclusively from private sources and 45 percent from both, in rural areas. The figures are roughly the same in urban areas, where there is 3 percent exclusive use of public health sources, 57 percent exclusive use of private health sources, and 40 percent use of both. If we look at the information in another way, we can say almost 97 percent inpatients in rural and 96 percent in urban areas received treatment at least once in private health services in the year before the survey.

The second round of the DLHS-RCH (2002-04) provides information on the treatment seeking behavior for many components of reproductive and child health care services. For instance, the incidence of women in reproductive age-groups experiencing induced abortions, antenatal, natal or post natal health care services, or any health problem during pregnancy, and the treatment of their children in infancy. Considering the three years period before the survey, 2002-04 (DLHS-RCH-II) data on the last pregnancy outcome of 38,182 women was extracted.

It was found that, of the sample 94 percent of women had live births, 1 percent experienced stillbirths, 2 percent had spontaneous abortions and almost 3 percent of women reported induced abortions. About 66 percent of induced abortions were performed by private services, out of which almost 67 percent of the women experienced health problems within 6 weeks of abortion, compared to only 26 percent of such women in public health care services (Table 1).

Table 1: India: Performed induced abortions and health problems experienced after abortion by health services, 1999-01 to 2002-04 (DLHS- RCH II)

	Induced abortion performed during 3 years before survey		Health problem experienced within 6 weeks of abortion	
	No. of cases	Percent	No. of cases	Percent
Govt. services	*314*	*27.4*	*60*	*25.8*
Private services	*752*	*65.6*	*156*	*66.7*
Others	*80*	*7.0*	*17*	*7.5*
Total	*1146*	*100.0*	*233*	*100.0*

However, during the second term of treatment for the emerged health problems due to induced abortion, 27 percent of women who had earlier performed their abortions at public health centers now opted for private health services. On the other hand, despite having the large number of unsuccessful cases of induced abortions in private health care centers, only 7 percent of women who had earlier had their abortion at private health centers went to public services for their second treatment, and 12 percent of those cases received treatment or consultation from other sources as depicted in Table 2.

Table 2: India: Health treatment after having health problem due to abortion by health services: 1999-01 to 2002-04 (DLHS- RCH II)

	Health treatment or consultation received after abortion	
	Percent of abortions, earlier performed by Govt. health services	Percent of abortions, earlier performed by Private health services
Govt. services	*68.8*	*6.8*
Private services	*27.1*	*81.5*
Others	*4.1*	*11.7*
Total	*100*	*100.0*

Since the government of India drew special attention to reproductive and child health care services after the 1994 ICPD, provision of services like antenatal check-ups and the distribution of other supplementary courses in terms of iron folic acid (IFA) tablets and/or tetanus injections have substantially improved. However, 49 percent of women still received antenatal check-ups from private sources compared to 45 percent from public sources and 6 percent from other sources. On the other hand, the maximum proportion of women (55 percent) received IFA tablets during pregnancy from public sources, compared to only 18 percent from private sources and 28 percent from other sources. Such distribution becomes easily understandable since the services were free of cost.

During the 1999-2000 period and 2002-04 (three years), out of the 507,622 women in reproductive age groups (which includes ages 15 to 44), 13 percent of women experienced any type of health problem during their pregnancy. Of these, 13 of percent women (66,747), more than 60 percent received treatment or consultation from private sources. There was no evidence of substantial variation in services received for different types of health problems during pregnancy. The proportion of women went for different health services for major health problems during pregnancy can be observed in Table A1

(Annexure)

Table 3: India: Place of delivery and post-delivery complication by women for their last live or still births by health services during the 3 years before survey, 2002-04

	Place of delivery		Post-delivery complication (during the first week after delivery)	
	No. of women	Percent	No. of women	Percent
Govt. services	*7471*	*19.1*	*2104*	*28.2*
Private services	*8407*	*21.5*	*2024*	*24.1*
Home	*22956*	*58.6*	*7634*	*33.3*
Others	*313*	*0.8*	*94*	*30.1*
Total	*39146*	*100.0*	*11856*	*30.3*

In the periods 1999 to 2000 and 2002-04, almost 59 percent of women (22,956) were reported to have delivered their children at home. 22 percent of women delivered their babies at private health centers, and 19 percent delivered in public health centers. As Table 3 illustrates, the chances of post-delivery complications appeared to be highest in cases of home deliveries and deliveries at other places, while there does not appear to be a significant different in post-delivery complication experiences between institutional (i.e. public and private) deliveries. This is a refutation of the myth that the quality of services in private sources is always better than the public sources, as the statistics show that the chances of failure in both theses institutional services are not considerably different. However, if post delivery complications emerged after deliveries performed at the home, more than 60 percent of women went for private health care services, compared to only 21 percent for public services and 18 percent for other services (Table 4).

Table 4: India: Post-delivery treatment by health services during the 3 years period before survey, 2002-04

	Percent of deliveries earlier performed at		
	Govt. services	Private services	Home
Govt. services	*46.4*	*13.0*	*20.5*
Private services	*45.4*	*79.4*	*61.1*
Others	*8.2*	*7.5*	*18.4*
Total	*100.0*	*100.0*	*100.0*

Table 5: India: Modern contraceptive use and resulted health problems by health services during the last 3 years before survey, 2002-04

Modern contraceptive methods	Govt. services		Private services		Others	
	C.U.*	H.P.**	C.U.	H.P.	C.U.	H.P.
Female sterilization	*80.4*	*17.3*	*18.0*	*14.2*	*1.6*	*21.8*
Vasectomy	*78.4*	*11.2*	*12.3*	*23.8*	*9.4*	*18.8*
IUD/Copper-T/Loop	*44.6*	*18.0*	*53.7*	*12.3*	*1.7*	*28.6*
Oral Pills	*16.5*	*18.8*	*78.5*	*15.6*	*5.0*	*14.2*
Condom/Nirodh	*13.5*	*2.4*	*82.5*	*1.6*	*4.0*	*0.0*
Total	*58.9*	*16.8*	*38.6*	*10.5*	*2.5*	*14.8*

* Contraceptive use ** Health problem emerged after contraceptive use

The proportion of health treatment or consultation sought after having problems with contraceptive use by health services, in the 3 years before the survey, i.e. from 2002-2004 is shown in Table 6. Almost 41 percent and 49 percent of women who had earlier received contraceptives from public and other sources respectively, used private health services.

Table 6: India: Health treatment or consultation received after having problem with contraceptive use by health services during the last 3 years before survey, 2002-04

	Percent of women, who used contraceptive methods earlier from		
	Govt. sources	Private sources	Others
Govt. services	*47.1*	*4.6*	*9.2*
Private services	*40.5*	*80.3*	*44.8*
Others	*12.4*	*15.1*	*45.9*
Total	*100.0*	*100.0*	*100.0*

Other sensitive health care treatments were also served primarily by the private health services. As can be seen in Table A2 (Annexure), almost 60 percent of women receive treatment or consultation for menstruation related problems and 61 percent for RTI/STI related problems from private sources (against 25 and 22 percent from public sources respectively). Similarly, 58 percent of women liked to go for private services in case of any abnormal vaginal discharge. These figures indicate a modest preference for private health services.

In the case of child health care services, too, one can clearly observe the bias toward private services, except in the case of immunization (which is provided by the government free of cost) for children. Almost 13 percent children of age 0-71 months had diarrhea during the last two weeks before the survey, and for the same reference period about 16 percent cases of respondents reported cases of pneumonia. Out of these cases, 68 percent of children with diarrhea and 69 percent of children with pneumonia were treated with private services (see Table A3, Annexure).

State differentials in utilization of health care services

By and large, there appeared a distinct geographical pattern that explained state

differentials in utilization of the two distinct health care services across the country. In general, in the Northern Hilly Region, the growth of private health care providers has not yet grown as much as in the central and southern states of India. This may be due to the fact that the level of urbanization or access to nearby, developed urban areas is positively associated with the development of private health services. This is apparent in Figures 1 and 2.

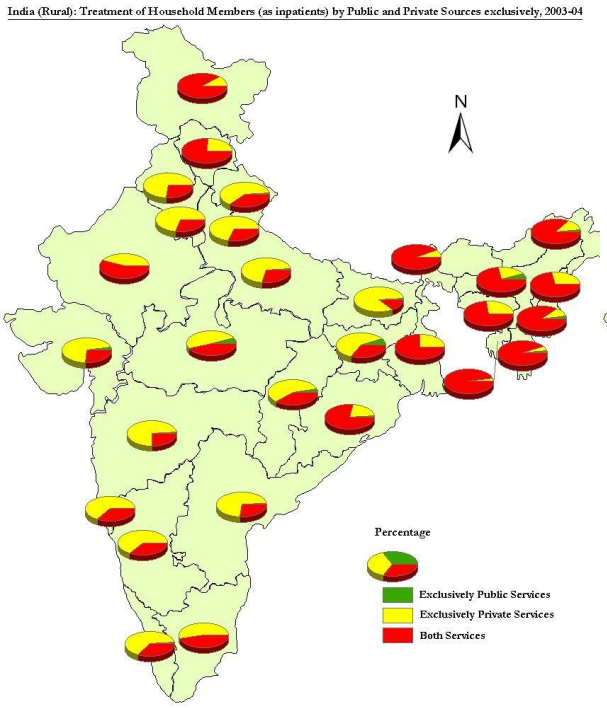

Figure 1. India (Rural): Treatment of Household Members (as inpatients) by Public and Private Sources exclusively, 2003-04

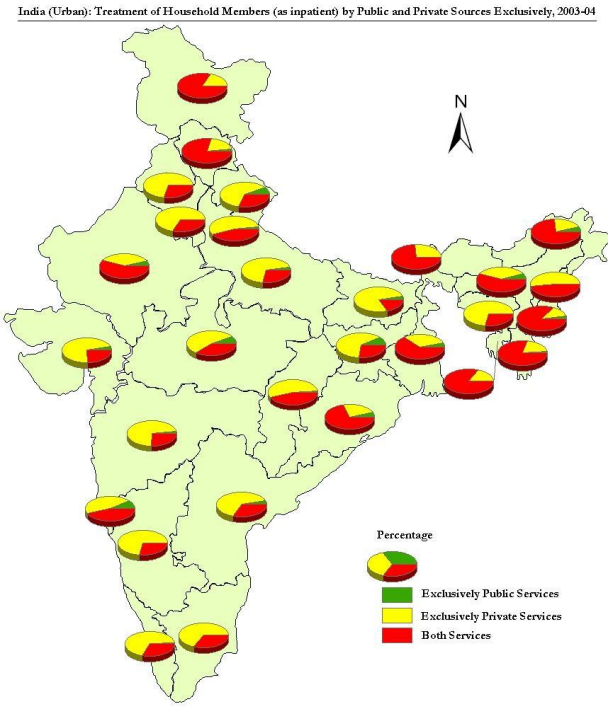

Figure 2. India (Urban): Treatment of Household Members (as inpatients) by Public and Private Sources exclusively, 2003-04

The utilization pattern of public and private health care services exclusively as well as the common services by the household members as inpatients of the hospital during the last year before survey (2004) in rural areas has been shown in Figure 1. This represents the utilization of health care services, especially hospital-based care in rural India, irrespective of age, sex, education, socio-economic status of the people, as well as the severity or kind of diseases. It is a crude picture of health care utilization, as it only includes inpatient cases. Nonetheless, it gives a large general overview. In these maps, one can easily observe the dominancy of private sector providers over public health care services, even in many rural areas. Maharashtra, Punjab, Andhra Pradesh, Gujarat, are the states where, even in rural areas, more than 70 percent of the people exclusively utilized private hospitals. These are all states that, to some extent, are recognized as well functioning, where the people's ability to pay for high priced private health care providers might be relatively highly. However, Bihar, one of the poorest states in the union, is distinctly ahead of any state in India in terms of utilization of private services,

where more than four-fifths (86%) of the residents in rural Bihar were reported to utilize private hospitals exclusively during the period. Among all the states in India, Jharkhand, Madhya Pradesh, Assam and Chhattisgarh had the highest proportion of people who utilized only public health care services during the period, yet in none of the states did more than 6 percent of the population do so. The higher proportions of public health care services in these less developed states of the country may indicate that people do not use private health care because they cannot afford it. It also suggests that better provision of health services by public institutions can raise public health service utilization. In almost every state in India, in urban areas, the utilization pattern of both the health care services is higher than in rural areas. In Bihar, Maharashtra, Karnataka, Meghalaya, Gujarat and Punjab, more than 70 percent of the people in urban areas utilized private hospitals during the year 2003-04. The utilization of public health services in urban areas is also far better than rural areas in almost all the states.

Figures 3 and 4 display utilization patterns of public and private health care services for various reproductive and child health (RCH) care components. On average, 67 percent of women in India utilized public health care only to receive family planning services, about 11 percent each for delivery purposes and antenatal care services, about 6 percent for the consultation or treatment of RTI/STI related problems, and about 3 percent for child health care services, while the utilization is even less than 2 percent for any health problem during pregnancy. The proportion of women, who went for induced abortions in public health care services, is almost negligible (0.37%). This suggests this fact that the utilization of public health care services depends mainly on the subsidized services. This is because Family Planning Programs during the last three decades have been run from government sources. However, the proportion also varies by state. In Andhra Pradesh, around four in every five women received family planning services from public sources during 2002-04. In addition, more than seventy percent of women in Gujarat, Karnataka, Maharashtra, Tamil Nadu, Bihar and Punjab had received only family planning services from public sources, compared to the less than 30 percent of women that received other RCH related care from public health care sources.

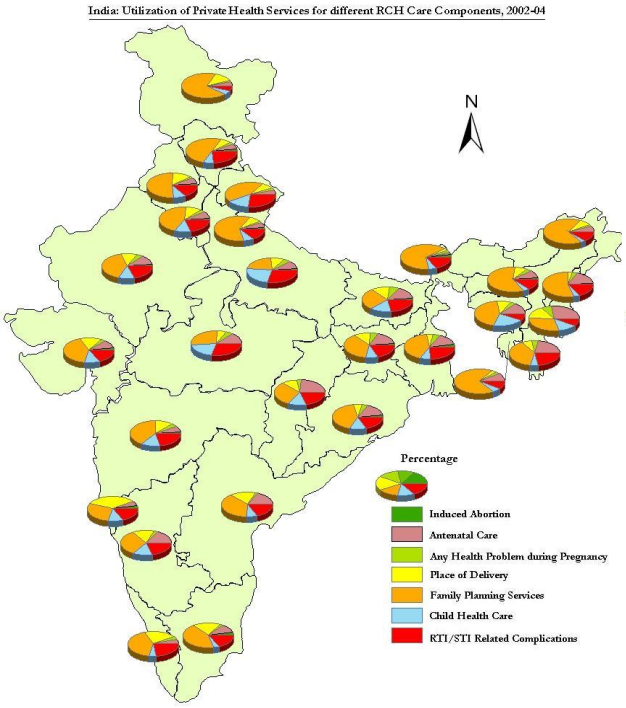

Figure 3. India: Utilization of Private Health Services for different RCH Care Components, 2002-04

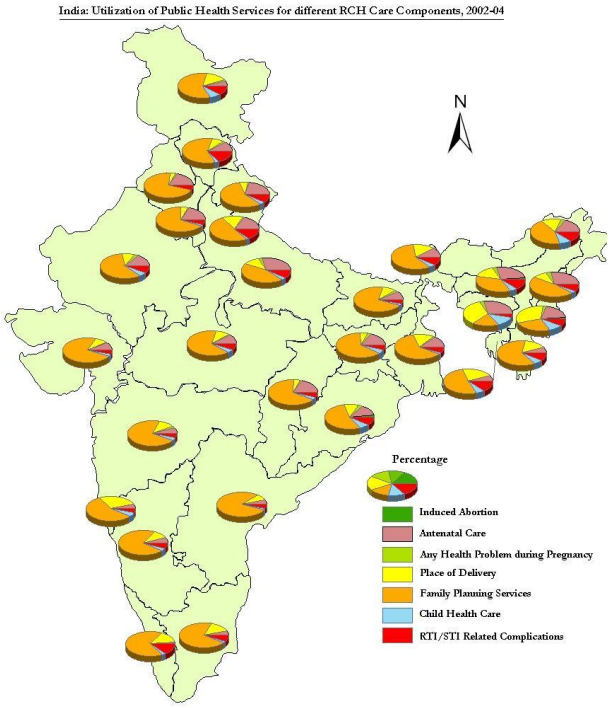

Figure 4. India: Utilization of Private Health Services for different RCH Care Components, 2002-04

On the other hand, the utilization pattern of RCH care components from private health care services did not appear as skewed as from public health care services. There were only 35 percent of women in India who reported receiving family planning services from private sources, while almost 21 percent did so for sensitive RTI/STI related problems, around 14 percent each for delivery purposes and child health care services, 11 percent for antenatal care services, 4 percent for any health problem during pregnancy, and almost all cases of induced abortions. This utilization pattern for the RCH care component from public as well as private providers reveals that for sensitive health care cases, e.g., health problem during pregnancy, abortions, delivery, and child health related problems, people always prefer to go for private services. Public services are used to benefit from government programs or to avail of free services or distribution of any health related component (e.g., medicines, contraceptives, immunization etc.).

Determinants influencing the utilization of health care services

The characteristics of the population opting for private health services differs significantly in rural and urban areas. In rural areas, adjusting for the influence of different socio-economic and demographic determinants, the impact of income level of population seems more prominent and highly significant. The probability of using private health services, in rural areas, is higher in all quintiles, in comparison to the lowest quintile of MPCE (Table 10). Among inpatient cases, the probability of utilizing private health services was lower among higher age groups in both rural and urban areas. There was no clear distinction found between both the sexes and among the inpatients of different marital status in the utilization of private health services. Among different

religion and social groups, both in rural and urban areas, the probability of using private health services seems different. In rural areas, the probability of utilizing private health services was found lower among Muslims compared to Hindus, while it was five times higher among Christians (odds ratio = 5.908, p<.001). On the other hand, the probability of utilizing private health services was higher among all other religious groups compared to Hindus, in urban areas.

Assessing the role of different social groups or castes on the utilization of private health services, we observe a hierarchical pattern in the odds ratios, in rural areas, recording an odds ratio of 1.284 (p<.10) for schedule castes (SCs), 1.512 (p<.05) for other backward castes (OBCs), and a maximum of 1.564 (p<.05) for other castes, taking the scheduled tribes (STs) (believed to be the most deprived social group in India) as the reference group. On the other hand, the probability increases tremendously for the SCs (odds ratio = 2.345, p<.001) and the others (odds ratio = 2.149, p<.001) group, compared to STs, in urban areas.

The level of education among the inpatients was not found to contribute significantly to their choice of private or public health services. Also, with an increase in household size, the probability of utilizing private health services also increases. This supports the hypothesis that the bigger the family size, and more wage earners, people will have greater economic security, which translates to better health security. The utilization of private health services was also observed likely to be more in case of sensitive diseases like gynecological disorders or heart diseases, compared to other kind of ailments. In rural areas, inpatients that suffered from any gynecological disorders were about two and a half times more likely to opt for private health services over public services, compared to general diseases like diarrhea or dysentery. On the other hand, in urban areas, gastritis/gastric or peptic ulcer, heart diseases, fever of unknown origin, accidents/injuries, and other diagnosed ailments (apart from gynecological disorders) were also observed to increase the probability of utilizing private health services significantly.

Similarly, regarding the use of private health services among all other reproductive and child health care services (here in the present paper, seven health care services have been considered), the impact of standard of living (SLI) of the women appeared significant and implied that the utilization of private health services were more in high and middle SLI group in comparison to the women of low SLI group, except in the case of induced abortion (Table 11).

Table 10: Results of Logistic Regression Models (odds ratios) for the population, who received treatment as inpatient from Private health services (during the last 1 year before survey, Jan-June, 2004) in India.

Demographic and socio-economic characteristics	Exp β (Odds Ratio)	
	Rural	Urban
Age composition		
Below 5®		
5-15	*0.925*	*0.973*
15-35	*0.646***	*0.482****
35-60	*0.567****	*0.365****
60 & above	*0.591***	*0.538***
Sex composition		
Male®		

Female	*1.011*	*1.052*
Marital Status		
Never married®		
Currently married	*1.002*	*1.014*
Others	*1.200*	*1.262*
Religion		
Hindu®		
Muslim	*0.582***	*1.558****
Christian	*5.908****	*1.558***
Others	*0.986*	*1.864***
Social groups		
ST®		
SC	*1.284**	*2.345****
OBC	*1.512***	*1.953****
Others	*1.564***	*2.149****
Education level		
Illiterate®		
Below Primary	*0.727***	*0.978*
Primary	*0.796***	*0.881*
Middle	*1.021*	*0.925*
High School & above	*1.070*	*1.095*
Household size		
1 to 5®		
5 to 10	*1.119*	*1.243***
10 & above	*2.150****	*2.006****
MPCE[α] (in Quintile)		
Q1®		
Q2	*1.736****	*1.148*
Q3	*1.977****	*1.033*
Q4	*1.707****	*1.238**
Q5	*1.790****	*2.308****
Nature of ailment		
Diarrhea / dysentery®		
Gastritis/gastric or peptic ulcer	*1.109*	*3.009****
Heart disease	*0.734***	*1.981****
Gynecological disorders	*2.486****	*3.027****
Fever(unknown origin)	*0.909*	*3.988****
Accidents/Injuries/Burns/ Fractures/Poisoning	*1.098*	*1.663****
Other diagnosed ailments	*1.381***	*2.215****

[α] Monthly Per Capita Expenditure ® Reference Category

* Significant at 10% level ** Significant at 5% level *** Significant at 1% level

The most important result to emerge from this study is evidence of the bias toward the use of private health services, which may be due to the view that government health care services are not of good quality. As we can clearly observe in Table 11, women who went to private health services for induced abortions, when asked to give reasons for not visiting government health services, reported the poor quality of government services (odds ratio= 6.429, p<.001) and were more likely to be of the opinion that in government health care services cases are not examined properly, as

compared to reason that government health services were inconveniently located (reference category).

Among the four macro regions of India, the western higher economy region was found to have higher use of private health services for all selected reproductive and child health services than the other three macro regions.

Ranking of states by extent of inequality in the utilization of health care services

Knowing there is a marked inequality in utilization of health services among people of different economic groups, it appears appropriate to assess which states of the country were characterized by higher extent of inequality among different economic categories using a complete summary measure of inequality. State values of $\sqrt{(\chi^2/N)}$ given in Table 12 for the utilization of different health services show whether there was significant association between economic groups and the given indicator. If the value is not significant, it implies that economic status does not have any effect on that indicator, and the situation with respect to that indicator is more or less the same among the given groups. If the value is significant but low it means economic group has only a moderate effect on that indicator. If the value is statistically significant and high, it shows a strong correlation between given categories and that indicator implying that the specific category does affect the dimension represented by the particular indicator and that the value of that indicator is high in certain groups and not in others. It is obvious that if there is notable inequality among economic groups regarding the dimensions reflected in these indicators, the value of $\sqrt{(\chi^2/N)}$ is likely to be high and significant. A value that is not significant but low can be taken as an indication of low inequality among the groups with respect to that particular indicator. In this sense, state ranks given in Table 12, represent the relative position of states by inequality among three economic groups in utilizing the selected indicators of health services. The first rank shows the highest inequality while 14^{th} or 15^{th} rank shows the lowest inequality. For the same values tied ranks have been assigned.

This includes the services sought for the ailing persons during the fifteen days before the survey and the day before the date of survey. The average ranking of both these components, sought from services of public and private health centers, are calculated for rural and urban areas.

The overall pattern of index values clearly shows that the extent of inequality among different economic groups is lower among the services provided by public health care centers and centers in rural areas. The result shows that the inequality in utilization of different reproductive and child health care services provided by public health care centers was the highest in West Bengal, followed by Assam, Orissa, Jharkhand, Chhattisgarh, Uttar Pradesh, Madhya Pradesh and so on. However, the index value was very low (below 0.2) for all these states, with the exception of West Bengal. This shows that inequality is rather low in the utilization of different health care services provided by public health care centers. In contrast, there was lower inequality in the utilization of reproductive and child health service from private sources in West Bengal. To some extent, this can be explained by the fact that private services are less encouraged by the communist state government. In addition, it could also be postulated that most of the reproductive and child health services that private sources provide were received by the people of almost same economic class. On the other hand, for the treatment of general

ailments, rural West Bengal had the highest economic inequality in seeking health care services (i.e. public vs. private) among all other states. In urban areas too, it is second to the state of Tamil Nadu, which recorded the highest economic inequality in utilizing health care services.

Table 11: Results of logistic regression models for the utilization of private health services in case of various health care components

Independent variables	Reference category	IA[1]	ANC[2]	PDT[3]	TCU[4]	RTI/STI[5]	Dia./Pnea.[6]	AHP[7]
Age in completed years		*1.112**	-	-	-	-	-	-
Women's years of schooling		*1.111***	*1.085***	*1.110**	*1.048**	*1.047**	*0.985**	*1.053*
Spouse's years of schooling		*1.022*	*1.042***	*0.977*	*1.059***	*1.017*	*1.046*	*1.027***
Marital duration		*0.869***		*0.985*	*0.990*	*0.994*		*1.005**
Age at consummation of marriage	18 years and above							
< 18 years		*3.858***	-	-	*1.147*	-	-	-
Age of women	< 25 years							
25 years & above		-	*0.942*	*0.742*	*1.057*	*1.126*	-	*0.957*
Social Groups								
(SC)	Others	*0.394***	*0.581***	*1.277*	*0.951*	*0.697**	*1.321*	*0.584****
(ST)		*0.683*	*0.828*	*1.263*	*0.656*	*1.478*	*0.955*	*0.664***
(OBC)		*0.844*	*1.101**	*1.426*	*1.203**	*1.092*	*0.971*	*1.093*
Religion		*0.291***		*3.593**				*0.934*
(Muslim)	Hindu		*1.149**	*	*0.910*	*0.963*	*0.871*	
(Christian)		*0.473*	*1.526** *	*1.549*	*1.509*	*0.732*	*0.329** *	*1.007*
(Others)		*1.609*	*0.833*	*2.693*	*1.352*	*0.750*	*0.400** *	*1.121*
Daughter (surviving)								
(2)	1	*1.381*	-	-	-	-	-	-
(3 and more)		*6.579** *	-	-	-	-	-	-
Children (surviving)								
(4 & more)	1-3	*0.631*	-	-	-	-	-	-
Reasons of abortion	unplanned pregnanc							

	y							
complication in pregnancy	*	*2.010*	-	-	-	-	-	-
last child too young		*0.743*	-	-	-	-	-	-
Reasons of not visiting Govt. services	not conveniently located							
Time not suited		*1.142*	*0.787***	*0.822*	*0.870*	*0.632***	*0.470***	*0.899*
Poor quality of services		*6.429****	*1.659****	*0.871*	*1.520****	*1.294***	*0.760*	*1.695****
Not examine properly		*3.710****	*1.678****	*1.757*	*1.369***	*1.728***	*0.868*	*1.774****
Standard of living								
(Medium)	Low	*0.350*	*1.165***	*1.675**	*1.112*	*0.975*	*1.061*	*0.952*
(High)		*0.292**	*1.940****	*1.246*	*1.537***	*1.300*	*2.084***	*1.493****
Residential status								
(Urban)	Rural	*1.426*	*0.987*	*1.608*	*2.090****	*1.187*	*1.310*	*1.066*
Macro Regions	Northern hilly region							
Western higher economy region		*3.701*	*1.845****	*1.268*	*0.747*	*2.543***	*3.207***	*1.894****
CWE[8] low economy region		*2.499*	*1.182*	*1.781*	*0.876*	*1.304*	*1.228*	*1.917****
Southern region		*3.927*	*2.318****	*0.830*	*0.303****	*1.264*	*1.656*	*1.796****

[1]Induced Abortion [2]Antenatal Check-ups [3]Post delivery treatment in Pvt. services of those women who delivered her child at home [4]Temporary Contraceptive Use [5]Problems related to RTI/STI [6]Treatment of Diarrhea /Pneumonia to children of age below 3 years [7]Treatment for any health problem during pregnancy [8]Central-western-eastern * $p < 0.1$ ** $p < 0.5$ *** $p < 0.01$

Kerala recorded the lowest economic inequality in utilizing different reproductive and child health care services from either source (i.e. public or private). However, the seventh and the fourth ranks of the state in seeking services for general ailment from public versus private sources in rural and urban areas respectively clearly indicates the use by lower income groups of public health care centers and higher income groups of private health care centers.

Apart from West Bengal, the states of Gujarat, Jharkhand, Chhattisgarh, Madhya Pradesh, Maharashtra and Uttar Pradesh had the highest economic inequality in reproductive and child health care services rendered from both public and private sources. This means that services in both the service-groups (i.e from public and/or

private sources) were received by people from a variety of economic classes. This could further be observed in the increased utilization of private health care services by lower income groups, most probably due to an increase in affordable private services.

The southern states of Andhra Pradesh and Tamil Nadu also recorded high economic inequality for the treatment of general ailments.

Table 12: India: Ranking of selected states by extent of inequality across three economic groups based on SLI[1] and MPCE[2] groups in utilization of health care services

	Utilization of Public health services[3]		Utilization of Private health services[4]		Utilization of health services in rural areas[5]		Utilization of health services in urban areas[6]	
States	$\sqrt{(\chi^2/N)}$	Rank	$\sqrt{(\chi^2/N)}$	Rank	$\sqrt{(\chi^2/N)}$	Rank	$\sqrt{(\chi^2/N)}$	Rank
Uttar Pradesh	0.152	6	0.331	7	0.095	13	0.112	13
Bihar	0.108	12	0.253	15	0.012*	15	0.043*	16
West Bengal	0.242	1	0.284	12	0.236	1	0.322	2
Andhra Pradesh	0.103	13	0.326	8	0.193	4	0.207	8
Maharashtra	0.155	5	0.348	6	0.215	2	0.258	6
Rajasthan	0.112	11	0.315	9	0.134	8	0.102	14
Madhya Pradesh	0.145	7	0.400	2	0.121	10	0.282	3
Assam	0.198	2	0.259	14	0.096	12	0.271	5
Tamil Nadu	0.118	10	0.301	11	0.213	3	0.328	1
Orissa	0.196	3	0.303	10	0.074	14	0.151	11
Karnataka	0.102	14	0.386	4	0.105	11	0.199	9
Haryana	0.129	8	0.265	13	0.105	11	0.218	7
Gujarat	0.119	9	0.398	3	0.177	5	0.183	10
Jharkhand	0.159	4	0.377	5	0.122	9	0.057*	15
Chhattisgarh	0.155	5	0.477	1	0.172	6	0.124	12
Kerala	0.046*	15	0.172	16	0.141	7	0.273	4

[1] Standard of Living Index [2] Monthly Per Capita Expenditure * not significant

[3] Extent of inequality across three SLI groups in utilization of Public health services for different RCH health care components.

[4] Extent of inequality across three SLI groups in utilization of Private health services for different RCH health care components.

[5] Extent of inequality across three MPCE groups in utilization of public and private health services (for inpatient cases) in rural areas

[6] Extent of inequality across three MPCE groups in utilization of public and private health services (for inpatient cases) in urban areas

Conclusion and Policy Implications

The recent patterns in health care provision in India clearly show an inclination toward increased private services, as more than ninety-five percent of inpatients in rural and urban areas reported receiving treatment at least once in the year before the survey through private health services (2003-04). Among all the states in India, Jharkhand, Madhya Pradesh, Assam and Chhattisgarh had the highest proportion of people who solely utilized public health care services during the period, but this was no more than 6 percent of the population.

The results also reveal the fact that the utilization of public health care services depends mainly on the provision of government-subsidized services. The utilization pattern of the RCH care component from public as well as private providers reveals that for sensitive cases like pregnancy complications, abortions, child delivery and child health, people preferred private services. In the case of general health indicators too, there appeared to be a higher likelihood to utilize private health services in cases with more sensitive diseases, like gynecological disorders or heart diseases, as compared to other ailments. The utilization of public services appeared to be most likely driven by a desire to use government programs that provided free services or distribution of medicines, contraceptives or immunizations. Most strikingly, it seems to emerge from this study that there exists a bias toward the use of private health services, due to the perception that government health care services are not high quality and patients do not receive adequate care. However, the study suggests that these misgivings are misplaced as an exploration of the pattern of treatment-failure in both institutional services suggests that in cases of delivery of babies the incidence of post-treatment complications does not differ significantly.

The states of Gujarat, Jharkhand, Chhattisgarh, Madhya Pradesh, Maharashtra, Uttar Pradesh, Bihar and West Bengal showed the highest economic inequality in reproductive and child health care services rendered from both public and private sources. However, West Bengal, Maharashtra, Tamil Nadu, Andhra Pradesh, and Gujarat were observed to be the five states that recorded the highest relative economic inequality in utilization of public versus private health services, for general health indicators in rural India. For urban areas, the top five were Tamil Nadu, West Bengal, Madhya Pradesh, Kerala, and Assam.

In a nutshell, the paper has provided a holistic view of the pattern of utilization of public and private health services for selected health components; explored a marked regional pattern in utilization of health services; analyzed the extent of economic inequality in choice of public or private health care services; and, finally, made an attempt to highlight those states where there is most need of more affordable health services. More specifically, the eastern and northeastern states of the country need to develop a better infrastructure in the health sector with special focus on child and reproductive health services. Further micro level study is needed, especially in rural areas of these regions, to devise specific health infrastructure development to improve the quality of public health providers, and, if possible, after micro-level mapping of the concentration of particular disease, subsidize treatment in a targeted manner. In addition, the scope for public-private partnership at a decentralized level, with absolute commitment from micro-level program executors, is desirable to facilitate better and more affordable health services.

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ANNEXURE

Table A1. India: Health services received by women for health problems during last pregnancy:
1999-01 to 2002-04

Health Problems during Pregnancy	*Services received from*		
	Govt. sources	Private services	Others
Swelling of hands and feet	*31.9*	*64.2*	*3.9*
Paleness	*34.1*	*61.9*	*4.0*
Visual disturbances	*36.3*	*54.1*	*9.5*
Convulsions	*37.0*	*54.0*	*9.0*
Others	*31.0*	*62.4*	*6.6*
Total	*32.9*	*61.2*	*6.0*

Table A2. India: Treatment or consultation for RTI/STI related problems by health services during the last 3 months before survey, 2002-04

	Treatment or consultation (percent of women) for problems related to		
	Menstruation	RTI/STI	Any abnormal vaginal discharge
Govt. services	*25.5*	*22.0*	*23.8*
Private services	*59.5*	*60.9*	*55.7*
Others	*15.0*	*17.1*	*20.4*
Total	*100.0*	*100.0*	*100.0*

Table A3. India: Child health care by health services during the last 3 years before survey,2002-04

	Percent of children, who were treated for or immunized		
	Diarrhea	Pneumonia	Immunized
Govt. services	*18.7*	*17.5*	*62.3*
Private services	*67.8*	*68.9*	*15.1*
Others	*13.5*	*13.6*	*22.6*
Total	*100.0*	*100.0*	*100.0*

Table A4. India: Statewise Utilization[#] of Public health services by different RCH care component, 2002-04 (DLHS RCH-II)

State	Reproductive & Child Health (RCH) Care Component						
	Induced Abortion	Antenatal Care	Any health Problem during Pregnancy	Place of Delivery	Family Planning	Child health care	RTI/STI
Jammu & Kashmir	0.05	4.17	1.84	15.24	60.38	8.79	9.53
Himachal Pradesh	0.28	9.20	1.94	8.82	61.76	3.56	14.42
Punjab	0.38	16.83	1.31	5.14	71.01	0.92	4.41
Chandigarh*	0.37	11.57	5.22	13.43	44.78	1.87	22.76
Uttaranchal	0.17	21.28	1.28	7.49	58.38	2.96	8.44
Haryana	0.17	17.03	1.68	6.03	68.74	1.10	5.25
Delhi	0.55	15.72	1.66	17.73	50.70	2.07	11.56
Rajasthan	0.44	12.88	3.21	11.49	60.04	4.66	7.28
Uttar Pradesh	0.84	28.29	3.30	11.24	45.66	2.59	8.09
Bihar	0.35	8.33	2.62	10.16	72.54	2.18	3.82
Sikkim	-	9.38	0.78	17.97	59.38	3.91	8.59
Arunachal Pradesh	0.45	16.29	3.17	17.19	42.53	9.05	11.31
Nagaland	0.56	28.09	4.49	10.11	47.19	2.81	6.74
Manipur	1.28	19.49	2.31	30.77	28.97	9.74	7.44
Mizoram	-	5.86	0.42	15.90	64.02	6.28	7.53
Tripura	0.34	5.93	0.85	23.73	51.69	6.44	11.02
Meghalaya	-	28.52	3.87	29.58	22.54	11.97	3.52
Assam	1.51	26.97	3.85	14.77	37.06	4.72	11.11
West Bengal	0.26	11.40	1.22	17.76	61.95	1.20	6.22
Jharkhand	0.52	15.53	3.08	6.84	65.43	3.97	4.63
Orissa	1.42	12.36	3.14	13.26	54.25	7.31	8.26
Chhattisgarh	0.23	16.95	1.40	6.09	67.74	3.00	4.60
Madhya Pradesh	0.15	9.06	1.60	10.42	68.53	3.59	6.65
Gujarat	0.24	7.73	1.17	8.42	76.31	2.05	4.07
Daman & Diu *	-	8.00	-	12.00	64.00	8.00	8.00
Dadra & Nagar Haveli *	-	18.37	2.04	8.16	53.06	10.20	8.16
Maharashtra	0.29	5.83	1.64	10.68	74.65	2.73	4.18
Andhra Pradesh	0.02	4.17	0.54	6.77	83.32	1.18	4.01
Karnataka	0.19	5.22	0.63	9.38	76.09	2.83	5.66
Goa	0.48	4.33	0.96	30.29	55.77	4.33	3.85
Lakshadweep *	-	11.76	5.88	47.06	11.76	11.76	11.76
Kerala	0.39	1.60	0.54	13.27	70.07	2.29	11.85
Tamil Nadu	0.21	3.96	0.59	14.02	73.33	1.60	6.29
Pondicherry *	0.29	1.18	0.29	17.11	73.16	1.18	6.78
A & N Islands *	-	3.60	0.72	17.27	63.31	7.91	7.19
India	0.37	10.87	1.69	11.12	66.96	2.71	6.28

[#] Percentage of women utilized or consulted public health services for different RCH care component
*Union Territories of India

Table A5. India: Statewise Utilization[#] of Private health services by different RCH care component, 2002-04 (DLHS RCH-II)

	Reproductive & Child Health (RCH) Care Component						
State	Induced Abortion	Antenatal Care	Any health Problem during Pregnancy	Place of Delivery	Family Planning	Child health care	RTI/STI
Jammu & Kashmir	-	3.78	1.10	12.44	73.41	4.27	5.00
Himachal Pradesh	1.78	5.15	2.38	7.13	51.09	8.91	23.56
Punjab	1.47	6.12	1.32	15.00	52.62	9.94	13.53
Chandigarh*	1.99	1.99	0.50	3.98	56.72	8.46	26.37
Uttaranchal	0.66	4.37	2.15	7.92	42.24	16.01	26.65
Haryana	1.22	7.05	2.71	12.85	42.56	14.48	19.14
Delhi	1.35	5.07	1.28	8.41	62.99	7.96	12.94
Rajasthan	1.05	10.86	4.48	14.44	36.72	13.86	18.59
Uttar Pradesh	1.34	8.38	5.09	11.05	22.31	22.66	29.16
Bihar	1.15	14.09	7.93	14.83	23.23	16.80	21.97
Sikkim	2.27	2.27	2.27	2.27	68.18	6.82	15.91
Arunachal Pradesh	-	5.48	1.37	8.22	71.23	2.74	10.96
Nagaland	1.04	16.15	4.17	3.65	54.69	5.21	15.10
Manipur	0.63	27.50	8.13	13.75	29.38	13.13	7.50
Mizoram	-	21.82	5.45	9.09	34.55	7.27	21.82
Tripura	-	8.20	2.65	3.17	72.75	5.29	7.94
Meghalaya	-	11.72	3.91	11.72	42.19	23.44	7.03
Assam	1.06	8.00	3.78	10.00	61.80	4.17	11.19
West Bengal	2.25	13.67	6.03	5.33	39.69	8.66	24.37
Jharkhand	1.14	16.60	6.72	13.35	33.56	11.24	17.40
Orissa	1.40	14.89	4.85	8.05	38.45	14.53	17.84
Chhattisgarh	0.57	23.22	3.96	11.66	26.24	15.15	19.21
Madhya Pradesh	0.65	11.54	5.14	7.75	26.77	19.04	29.11
Gujarat	1.97	8.85	3.02	19.00	38.17	13.01	15.99
Daman & Diu *	2.78	8.33	2.78	16.67	47.22	13.89	8.33
Dadra & Nagar Haveli *	-	7.50	2.50	15.00	37.50	15.00	22.50
Maharashtra	1.13	6.10	3.94	13.72	38.50	15.40	21.21
Andhra Pradesh	0.25	15.30	2.45	21.03	35.58	9.00	16.38
Karnataka	0.82	14.99	2.83	18.16	27.20	16.78	19.22

Goa	2.42	5.31	0.97	36.71	26.09	12.56	15.94
Lakshadweep *	-	-	-	33.33	33.33	-	33.33
Kerala	0.71	4.58	2.79	25.20	38.22	5.94	22.57
Tamil Nadu	2.41	10.14	2.11	22.90	42.08	4.95	15.40
Pondicherry *	2.21	20.59	2.94	19.12	25.74	8.09	21.32
A & N Islands *	-	-	-	25.00	58.33	8.33	8.33
India	1.27	10.50	4.17	14.28	35.15	13.64	20.99

[#] Percentage of women utilized or consulted private health services for different RCH care component

*Union Territories of India

Table A6. India: Household members (%) got treatment (as inpatient cases) in last 1 year before survey by Residence, Type of Hospital and by Economic Status, 2004 (NSS)

	Urban						Rural					
	Utilization of Public Services			Utilization of Private Services			Utilization of Public Services			Utilization of Private Services		
States	Poor	Medium	Rich	Poor	Medium	Rich	Poor	Medium	Rich	Poor	Medium	Rich
Jammu & Kashmir	12.4	50.7	36.9	10.2	42.2	47.6	4.8	33.9	61.3	-	28.2	71.8
Himachal Pradesh	32.8	32.8	34.4	6.3	45.6	48.1	11.1	27.0	61.9	7.3	26.0	66.7
Punjab	18.5	51.9	29.6	25.7	37.2	37.1	10.5	12.9	76.5	3.0	18.0	79.0
Chandigarh	3.8	29.7	66.5	-	17.2	82.8	7.6	11.5	80.9	-	21.1	78.9
Uttaranchal	44.9	39.5	15.6	35.8	39.6	24.6	14.8	55.9	29.3	8.4	23.7	67.9
Haryana	37.0	36.7	26.3	17.4	44.6	38.0	6.1	12.3	81.6	8.2	20.1	71.7
Delhi	18.1	49.3	32.6	9.4	30.0	60.6	-	-	100.0	-	14.0	86.0
Rajasthan	35.7	40.9	23.4	26.3	49.3	24.4	27.5	37.1	35.4	17.7	35.8	46.5
Uttar Pradesh	58.2	29.8	12.0	46.8	34.7	18.4	37.4	36.3	26.2	29.0	36.8	34.2
Bihar	51.6	34.4	14.1	56.7	31.6	11.7	44.0	36.8	19.2	45.6	35.4	19.0
Sikkim	7.1	49.1	43.8	-	5	72.5	18.8	43.4	37.8	11.1	20.6	68.3
Arunachal Pradesh	41.0	52.3	6.7	33.3	52.6	14.0	24.0	29.1	46.8	27.9	25.5	46.7
Nagaland	4.0	52.4	43.7	-	1	65.9	-	8.7	91.3	-	2.8	97.2
Manipur	32.0	59.1	8.9	14.9	68.7	16.4	2.8	23.2	74.0	-	11.7	88.3
Mizoram	5.7	45.2	49.1	9.8	32.2	58.0	4.1	8.1	87.8	-	-	100.0
Tripura	45.0	38.0	17.0	14.3	24.6	61.4	34.1	40.8	25.1	2.2	35.6	62.2
Meghalaya	29.3	52.9	17.9	12.0	37.9	50.1	6.3	38.3	55.3	-	17.7	82.3
Assam	25.3	45.2	29.5	12.2	31.8	56.1	19.8	35.3	44.9	13.3	30.8	55.9
West Bengal	44.2	34.7	21.1	21.5	26.7	51.8	37.8	37.3	24.9	18.9	33.1	48.0
Jharkhand	41.8	38.2	20.0	42.8	33.2	24.0	49.8	30.4	19.8	41.7	42.8	15.4
Orissa	48.0	34.2	17.8	41.2	27.7	31.1	58.7	25.9	15.4	50.3	29.0	20.8
Chhattisgarh	41.7	43.7	14.6	46.8	32.3	20.9	75.5	16.0	8.5	59.3	29.0	11.7
Madhya Pradesh	64.8	30.7	4.5	40.6	39.5	19.9	43.5	38.9	17.6	36.2	36.3	27.5
Gujarat	24.1	55.5	20.4	18.6	41.8	39.6	22.9	37.9	39.2	17.6	24.1	58.3
Daman & Diu	-	42.1	57.9	4.0	38.1	57.9	-	-	100	-	25.7	74.3

			9		1				.0			
Dadra &	13.		43.	18.	38.		15.	18.	65.			
Nagar Haveli	0	43.5	5	5	9	42.6	6	8	6	-	37.1	62.9
	42.		16.	21.	39.		37.	37.	24.	19.		
Maharashtra	1	41.9	0	3	0	39.6	5	7	8	3	36.0	44.7
Andhra	42.		13.	27.	42.		39.	34.	25.	22.		
Pradesh	4	43.8	8	2	3	30.5	4	7	8	8	33.4	43.8
	47.		10.	32.	40.		33.	43.	22.	27.		
Karnataka	8	42.2	1	1	9	27.0	4	9	7	8	39.7	32.5
	19.		29.	27.	36.			32.	67.			
Goa	4	51.5	1	8	7	35.6	-	8	2	-	15.4	84.6
	20.		26.		46.			10.	89.			
Lakshadweep	8	52.5	7	9.5	9	43.5	-	6	4	-	14.1	85.9
	56.			36.	29.		13.	26.	59.			
Kerala	0	34.8	9.2	3	8	34.0	8	4	8	5.7	26.5	67.8
	50.		10.	24.	37.		31.	36.	32.	17.		
Tamil Nadu	5	39.2	3	2	8	38.0	0	5	5	3	30.3	52.4
	40.		15.	25.	33.			43.	48.	22.		
Pondicherry	8	44.2	0	0	6	41.4	8.0	8	2	7	-	77.3
A & Nicobar			34.		48.			20.	79.			100.
Islands	5.6	59.9	5	-	6	51.4	-	5	5	-	-	0
	39.		20.	29.	37.		30.	33.	36.	25.		
India	2	40.8	0	5	5	33.0	3	1	6	9	33.0	41.2

Table A7. India: Household members (%) got treatment (as inpatient cases) in last 1 year before survey by Residence and Type of Hospital, 2004 (National Sample Survey)

	Urban					Rural				
States	Pub. hospital / dispensary	Private hospital	Public (Exclusively)	Private (Exclusively)	Both services	Pub. hospital/ dispensary	Private hospital	Public (Exclusively)	Private (Exclusively)	Both services
Jammu &		17.			82.		10.			
Kashmir	82.6	4	0.5	17.4	1	89.8	2	0.7	10.2	89.1
Himachal		19.			78.		24.			
Pradesh	80.2	8	1.3	19.8	9	75.8	2	0.5	24.2	75.3
		71.			28.		73.			
Punjab	28.9	1	-	71.1	9	27.0	0	0.7	73.0	26.4
		14.			85.		10.			
Chandigarh	85.7	3	-	14.3	7	89.2	8	-	10.8	89.2
		62.			30.		60.			
Uttaranchal	38.0	0	7.5	62.0	5	39.4	6	1.3	60.6	38.0
		67.			31.		70.			
Haryana	32.6	4	0.8	67.4	8	29.6	4	0.2	70.4	29.4
		54.			44.		69.			
Delhi	45.8	2	1.6	54.2	2	30.6	4	-	69.4	30.6
		39.			55.		44.			
Rajasthan	60.1	9	4.6	39.9	5	56.0	0	0.8	44.0	55.2
Uttar		68.			27.		69.			
Pradesh	31.1	9	3.1	68.9	9	30.5	5	1.9	69.5	28.5
		79.			17.		85.			
Bihar	20.3	7	3.0	79.7	3	14.2	8	1.3	85.8	12.9
		26.			73.					
Sikkim	73.7	3	-	26.3	7	93.0	7.0	0.9	7.0	92.1
Arunachal		21.			73.		12.			
Pradesh	78.4	6	4.7	21.6	7	87.5	5	2.0	12.5	85.5

Nagaland	48.3	51.7	-	51.7	48.3	71.8	28.2	-	28.2	71.8
Manipur	87.6	12.4	2.4	12.4	85.2	90.3	9.7	2.7	9.7	87.6
Mizoram	80.7	19.3	1.4	19.3	79.3	95.6	4.4	2.1	4.4	93.5
Tripura	83.6	16.4	-	16.4	83.6	97.2	2.8	-	2.8	97.2
Meghalaya	28.5	71.5	0.6	71.5	27.9	73.1	26.9	-	26.9	73.1
Assam	60.8	39.2	5.2	39.2	55.5	77.9	22.1	5.4	22.1	72.4
West Bengal	65.2	34.8	3.7	34.8	61.5	75.1	24.9	0.9	24.9	74.2
Jharkhand	35.5	64.5	8.5	64.5	26.9	40.5	59.5	6.3	59.5	34.2
Orissa	73.7	26.3	4.3	26.3	69.4	79.1	20.9	1.1	20.9	77.9
Chhattisgarh	46.4	53.6	1.2	53.6	45.2	42.9	57.1	3.3	57.1	39.6
Madhya Pradesh	46.3	53.7	7.4	53.7	38.9	50.6	49.4	5.7	49.4	44.9
Gujarat	28.6	71.4	3.7	71.4	24.8	29.3	70.7	2.7	70.7	26.6
Daman & Diu	23.2	76.8	-	76.8	23.2	13.4	86.6	-	86.6	13.4
Dadra & Nagar Haveli	29.9	70.1	-	70.1	29.9	67.4	32.6	7.4	32.6	60.0
Maharashtra	27.9	72.1	2.2	72.1	25.7	26.7	73.3	1.7	73.3	24.9
Andhra Pradesh	36.1	63.9	3.5	63.9	32.6	28.0	72.0	1.1	72.0	26.9
Karnataka	28.0	72.0	-	72.0	28.0	36.6	63.4	-	63.4	36.6
Goa	53.4	46.6	8.3	46.6	45.1	35.8	64.2	-	64.2	35.8
Lakshadweep	40.7	59.3	-	59.3	40.7	48.7	51.3	-	51.3	48.7
Kerala	32.9	67.1	1.2	67.1	31.7	37.0	63.0	1.5	63.0	35.6
Tamil Nadu	34.1	65.9	0.3	65.9	33.8	46.8	53.2	0.6	53.2	46.2
Pondicherry	65.2	34.8	-	34.8	65.2	83.6	16.4	-	16.4	83.6
A & Nicobar Islands	86.9	13.1	1.9	13.1	85.0	97.5	2.5	-	2.5	97.5
India	43.1	56.9	2.7	56.9	40.4	46.9	53.1	1.8	53.1	45.1